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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,915	07/16/2007	Masanori Yoshihara	4252-0117PUS1	4688

2292 7590 01/29/2010

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EXAMINER	
KHATRI, PRASHANT J	
ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
01/29/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/549,915	YOSHIHARA ET AL.	
	Examiner	Art Unit	
	PRASHANT J. KHATRI	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

In response to Amendments/Arguments filed 10/19/2009. Claims 1-13 are pending. Claims 1 and 3 were amended. Claims 9-13 were added as new.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4, 6-8, and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz et al. (***WO 02/04374***) in view of Tsukada et al. (***US 6129980***) and Yuasa et al. (***JP 2001-108826***) with evidence by Yamaoka et al. (***US 6417904***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a).*

3. Schulz et al. disclose an antireflective film for optical elements including opto-electronic components (***col. 1, lines 8+***). Concerning claims 1 and 3-4, Schulz et al. disclose a laminate comprising a transparent substrate upon which an alternating low refractive index material and high refractive index material is formed (***abstract; FIG. 8,***

col. 2, lines 40+). The materials are disposed upon the substrate by well-known means such as CVD, PVD, and the like (***col. 1, lines 42+***). The low index material may be comprised of silicon oxide and the like (***col. 3, lines 4+***) and the high index material is comprised of ITO, titanium dioxide, and the like (***col. 2 bridged to 3, lines 66+***). The lamination in this order simultaneously produces a high abrasion resistance and a high reflection reducing effect (***col. 3, lines 29+***). However, Schulz et al. are silent to the presently claimed hardcoat layer and substrate material.

4. Tsukada et al. disclose an antireflection film and a display using the same. Regarding the hardcoat layer, Tsukada et al. disclose the hardcoat layer is comprised of monomers and/or polymers and/or oligomers of acrylic, urethane, and epoxy compounds (***col. 23, lines 1+***). Specifically, the substrate is coated with a composition containing a urethane acrylate (***col. 24, lines 28+***).

5. Yuasa et al. disclose a protective film for a polarizing plate and manufacturing methods thereof. Concerning claims 1 and 2, Yuasa et al. disclose a resin-based substrate material comprising an alicyclic structure such as norbornene (***para. 0011***). Regarding the photoelastic coefficient it is noted that the material must have values that are less than 20×10^{-7} cm^2/kgf (***para. 0008***), which when converted is 2×10^{-10} Pa^{-1}. It is further noted that the thickness of the substrate material is from 5 microns to 500 microns (***para. 0020***). Given that the substrate material disclosed is the same as that presently claimed, Examiner takes the position that the presently claimed water-absorbing percentage and warpage as well as the "volatile component" of claim 9 would be met by the disclosure of Yuasa et al. As evidenced by Yamaoka et al., the

norbornene-based substrates have excellent water absorption and photoelastic coefficients which allow for controlling of birefringence, which is a known issue within the art (***col. 3, lines 37+***).

Concerning claims 7 and 8, Yuasa et al. disclose that the polarizing plate can be adhered on one side. Given the broad disclosure, Examiner takes the position that the disclosure includes the presently claimed limitations of claim 7. Further, it is noted that the article can be used in LCDs (***abstract***).

6. However, note that while Tsukada et al. and Yuasa et al. do not disclose all the features of the present claimed invention, the above references are used as teaching references, and therefore, it is not necessary for these secondary references to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, a hardcoat and type of substrate in order to provide mechanical stability through the hardcoat and reduce birefringence effects and in combination with the primary reference, discloses the presently claimed invention.

7. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Schulz et al. disclose an antireflective film for optical elements. However, Schulz et al. are silent to the presently claimed hardcoat layer and substrate material. Regarding the hardcoat layer, Tsukada et al. disclose the hardcoat layer is comprised of monomers and/or polymers and/or oligomers of acrylic, urethane, and epoxy compounds. Yuasa et al. disclose a

protective film for a polarizing plate and manufacturing methods thereof wherein the film is comprised of a resin-based substrate material comprising an alicyclic structure such as norbornene. Hardcoat layers are known within the optical arts as providing mechanical stability as well as hardness for a laminate and as such, would have been obvious to one of ordinary skill in the art to use. As evidenced by Yamaoka et al., the norbornene-based resins for use in substrates allow for reduction in birefringence by having a low absorbance and photoelastic coefficient than comparable substrates. As such, it would have been obvious to one of ordinary skill in the art the combine the elements as shown given that Schulz provides an optical stack having the desired abrasion resistance and reflection reducing effect, while a hardcoat is known in the art to provide mechanical stability in conjunction to a substrate containing a material that reduces birefringence; thus resulting in the presently claimed invention.

8. Claims 1-3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaoka et al. (***US 6417904***) in view of Schulz et al. (***WO 02/04374***) and Tsukada et al. (***US 6129980***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a)*.

9. Yamaoka et al. disclose an optically compensatory film, polarizing plate, and LCD thereof. Regarding claim 1, Yamaoka et al. disclose a transparent film base having a water absorption coefficient less than 1.0% and a photoelastic coefficient that

is less than 30 X 10^{-12} m^2/N (***abstract***). Further, the thickness of the film base material is from 5 microns to 300 microns (***col. 4, lines 10+***). As shown in Figures 1 and 2, the polarizing plate (***element 3; col. 3, lines 2+, col. 4, lines 49+***) can be laminated onto the transparent film base and further, an anti-reflection layer can be disposed onto the surface of the polarizing plate. Regarding claim 9, given that Yamaoka et al. disclose the same composition having the desired absorption and photoelastic coefficients, the volatile component content would be intrinsically met. Concerning claim 2, it is noted that the transparent film base is comprised of hydrogenated norbornene polymer having an alicyclic structure especially polymers having no hydrophilic groups or two or less hydrophilic groups per component monomers and the like (***col. 3, lines 60+***). Given the above disclosure regarding the material comprising the transparent base film and the desired absorption and photoelastic coefficient characteristics, it is clear that the disclosure of Yamaoka et al. would include and encompass the presently claimed absorption and photoelastic coefficient characteristics. Regarding claims 7 and 8, as shown in Figure 3, an optically compensatory polarizing plate (***element 5; col. 7, lines 8+***) is provided on one side of a liquid crystal cell. However, Yamaoka et al. are silent to a hardcoat layer and AR film having the presently claimed order.

10. Schulz et al. disclose an antireflective film for optical elements including opto-electronic components (***col. 1, lines 8+***). Concerning claims 1 and 3-4, Schulz et al. disclose a laminate comprising a transparent substrate upon which an alternating low refractive index material and high refractive index material is formed (***abstract; FIG. 8, col. 2, lines 40+***). The materials are disposed upon the substrate by well-known means

such as CVD, PVD, and the like (***col. 1, lines 42+***). The low index material may be comprised of silicon oxide and the like (***col. 3, lines 4+***) and the high index material is comprised of ITO, titanium dioxide, and the like (***col. 2 bridged to 3, lines 66+***). The lamination in this order simultaneously produces a high abrasion resistance and a high reflection reducing effect (***col. 3, lines 29+***). However, Schulz et al. are silent to the presently claimed hardcoat layer and substrate material.

11. Tsukada et al. disclose an antireflection film and a display using the same. Regarding the hardcoat layer, Tsukada et al. disclose the hardcoat layer is comprised of monomers and/or polymers and/or oligomers of acrylic, urethane, and epoxy compounds (***col. 23, lines 1+***). Specifically, the substrate is coated with a composition containing a urethane acrylate (***col. 24, lines 28+***).

12. However, note that while Tsukada et al. do not disclose all the features of the present claimed invention, the above reference is used as a teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, a hardcoat in order to provide mechanical stability through the hardcoat and in combination with the primary reference, discloses the presently claimed invention.

13. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Yamaoka et al. disclose an optically compensatory film, polarizing plate, and LCD thereof. However Yamaoka et al.

is silent to composition of the anti-reflective layers and hardcoat. Schulz et al. disclose an antireflective film for optical elements including opto-electronic components wherein said AR film is a laminate comprising a transparent substrate upon which an alternating low refractive index material and high refractive index material is formed. Regarding the hardcoat layer, Tsukada et al. disclose the hardcoat layer is comprised of monomers and/or polymers and/or oligomers of acrylic, urethane, and epoxy compounds. The motivation to combine the above references is drawn to the hardcoat layers which are known within the optical arts as providing mechanical stability as well as hardness for a laminate and Schulz which discloses the alternating stack as shown allows for improved abrasion resistance and reflection reducing effect.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz et al. (***WO 02/04374***) in view of Tsukada et al. (***US 6129980***) and Yuasa et al. (***JP 2001-108826***) with evidence by Yamaoka et al. (***US 6417904***) as applied to claim 4 above, and further in view of Nakajima (***JP 2000-336196***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a).*

15. Schulz, Tsukada, Yuasa, and Yamaoka disclose the above. However, prior art is silent to the presently claimed multi-chambered deposition process.

1. Nakajima discloses a process for forming anti-reflective film layers on a polymer film (***abstract***). Concerning claim 5, Nakajima discloses a process of forming

successive layers comprising inorganic oxide materials that individually possess different refractive indices (***para. 0038-0042***). The successive layers are produced by a drum that has a plurality of chambers containing a different reaction in each chamber thus resulting in different inorganic oxide layers formed (***para. 0040-0042***). The inorganic oxide materials used are those that form silica, titanium dioxide, and the like (***para. 0042***). The motivation to use a multi-chambered drum is that one can control the temperature of polymer film to prevent decomposition of said film while simultaneously forming a multilayered anti-reflective film (***para. 0010-0014***).

16. However, note that while Nakajima does not disclose all the features of the present claimed invention, Nakajima is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, a multi-chambered drum process in order to deposit inorganic oxide in a laminated from while controlling the temperature to prevent decomposition of the polymer film and in combination with the primary reference, discloses the presently claimed invention.

17. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Schulz, Tsukada, Yuasa, and Yamaoka disclose the above. However, prior art is silent to the presently claimed multi-chambered deposition process. Nakajima discloses a process for forming anti-reflective film layers on a polymer film using a multi-chambered drum. The motivation to

combine the above references is drawn towards a multi-chambered drum allows one to control the temperature of polymer film to prevent decomposition of said film while simultaneously forming a multilayered anti-reflective film. Therefore, it would have been obvious to one of ordinary skill in the art apply the multi-chambered drum disclosed by Nakajima as the deposition process for producing the anti-reflective layers disclosed by Schulz.

18. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaoka et al. (***US 6417904***) in view of Schulz et al. (***WO 02/04374***) and Tsukada et al. (***US 6129980***) as applied to claim 4 above, and further in view of Nakajima (***JP 2000-336196***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a)*.

19. Yamaoka, Schulz, and Tsukada disclose the above. However, prior art is silent to the presently claimed multi-chambered deposition process.

2. Nakajima discloses a process for forming anti-reflective film layers on a polymer film (***abstract***). Concerning claim 5, Nakajima discloses a process of forming successive layers comprising inorganic oxide materials that individually possess different refractive indices (***para. 0038-0042***). The successive layers are produced by a drum that has a plurality of chambers containing a different reaction in each chamber thus resulting in different inorganic oxide layers formed (***para. 0040-0042***). The

inorganic oxide materials used are those that form silica, titanium dioxide, and the like (***para. 0042***). The motivation to use a multi-chambered drum is that one can control the temperature of polymer film to prevent decomposition of said film while simultaneously forming a multilayered anti-reflective film (***para. 0010-0014***).

20. However, note that while Nakajima does not disclose all the features of the present claimed invention, Nakajima is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely, a multi-chambered drum process in order to deposit inorganic oxide in a laminated from while controlling the temperature to prevent decomposition of the polymer film and in combination with the primary reference, discloses the presently claimed invention.

21. All of the elements were known within the art. The only difference is a single disclosure containing all of the presently claimed elements. Yamaoka, Schulz, and Tsukada disclose the above. However, prior art is silent to the presently claimed multi-chambered deposition process. Nakajima discloses a process for forming anti-reflective film layers on a polymer film using a multi-chambered drum. The motivation to combine the above references is drawn towards a multi-chambered drum allows one to control the temperature of polymer film to prevent decomposition of said film while simultaneously forming a multilayered anti-reflective film. Therefore, it would have been obvious to one of ordinary skill in the art apply the multi-chambered drum disclosed by

Nakajima as the deposition process for producing the anti-reflective layers disclosed by Schulz.

22. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz et al. (***WO 02/04374***) in view of Tsukada et al. (***US 6129980***) and Yuasa et al. (***JP 2001-108826***) with evidence by Yamaoka et al. (***US 6417904***) as applied to claim 4 above, and further in view of Kawada et al. (***JP 200-280315***) and Rosato (***Book***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a)*.

23. Yamaoka, Schulz, and Tsukada disclose the above. However, prior art is silent to the presently claimed cooling drums and extrusion of substrate thereof.

24. Kawada et al. disclose extrusion of cyclic olefin films such as norbornene with the use of a plurality of cooling rolls (***abstract; para. 0022-0043***). Examiner notes that the phrase “cooling drums” is equivalent to what is commonly known in the art as “chill rolls”. As such, the terms will be used interchangeably within this rejection. Concerning claims 9-13, Kawada et al. disclose the material is extruded through a T-die and cooled by two or more cooling rollers to result in a surface roughness of less then 0.3 microns or less (***abstract; para. 0044-0066***). Regarding the "cooling rolls" or "chill rolls", it is noted that Rosato discloses that chill roll speed affects the thickness and uniform thickness is affected by the speed of the chill roll as well as the extruder output (***p. 457,***

Gauge Variation). Further as shown in Table 11.4 on page 466 as well as p. 463 on the top 2 paragraphs, chill roll temperature affects the surface slip characteristics. While it is noted Rosato provides disclosures regarding coating practices, it is the Examiner's position that such characteristics are obvious to optimize to produce the desired surface roughness as shown by Kawada and would have been obvious to one of ordinary skill in the art to produce.

25. Claims 11-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaoka et al. (***US 6417904***) in view of Schulz et al. (***WO 02/04374***) and Tsukada et al. (***US 6129980***) as applied to claim 4 above, and further in view of Kawada et al. (***JP 200-280315***) and Rosato (***Book***). The PCT application was published January 17, 2002. Examiner would like to note that the US Patent No. 6645608 is used as the translation as the specification for entry as a National Stage Application must be translated as filed into English. *See MPEP 1893.01(a)*.

26. Yamaoka, Schulz, and Tsukada disclose the above. However, prior art is silent to the presently claimed cooling drums and extrusion process thereof.

27. Kawada et al. disclose extrusion of cyclic olefin films such as norbornene with the use of a plurality of cooling rolls (***abstract; para. 0022-0043***). Examiner notes that the phrase “cooling drums” is equivalent to what is commonly known in the art as “chill rolls”. As such, the terms will be used interchangeably within this rejection. Concerning claims 9-13, Kawada et al. disclose the material is extruded through a T-die and cooled by two or more cooling rollers to result in a surface roughness of less then 0.3 microns

or less (***abstract; para. 0044-0066***). Regarding the "cooling rolls" or "chill rolls", it is noted that Rosato discloses that chill roll speed affects the thickness and uniform thickness is affected by the speed of the chill roll as well as the extruder output (***p. 457, Gauge Variation***). Further as shown in Table 11.4 on page 466 as well as p. 463 on the top 2 paragraphs, chill roll temperature affects the surface slip characteristics. While it is noted Rosato provides disclosures regarding coating practices, it is the Examiner's position that such characteristics are obvious to optimize to produce the desired surface roughness as shown by Kawada and would have been obvious to one of ordinary skill in the art to produce.

Response to Arguments

28. Applicant's arguments, see p. 6, filed 10/19/2009, with respect to the objection of the abstract have been fully considered and are persuasive. The objection of the abstract has been withdrawn. Examiner notes new abstract meets the requirements.

29. Applicant's arguments, see pp. 7-10, filed 10/19/2009, with respect to rejections under the Yuasa, Yamaoka, and Nakajima references have been fully considered and are persuasive. The above of rejections have been withdrawn. However, it is noted that Yuasa, Yamaoka, and Nakajima are still viable both as secondary references and specifically for Yamaoka as a primary and secondary reference as shown above. Regarding the Yuasa and Nakajima references, it is acknowledged that the present claims overcame the previous rejections under those references and now are applied as

secondary references for teaching the presently claimed substrate as well as a method in forming AR films upon polymeric substrates by vacuum deposition.

Conclusion

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PRASHANT J. KHATRI whose telephone number is (571)270-3470. The examiner can normally be reached on M-F 8:00 A.M.-5:00 P.M. (First Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia L. Nordmeyer/
Primary Examiner, Art Unit 1794

PRASHANT J KHATRI
Examiner
Art Unit 1794